

piece step includes the sub-steps of: placing said middle portion proximate to but not in contact with a surface of a heating element, placing a cooling element against the inner waste piece, and lifting the inner waste piece relative to the middle portion to thereby separate the inner waste piece from the middle portion. Hence, even in view of the interpretation of the November 05, 2002 office action that a flame has a surface, Applicants point out that it is clear from Figure 3 that the flame (surface) is in contact with element 6. Thus, McCormick is not believed to anticipate or render obvious the invention of Claim 1.

Claim 17 has been amended to clarify that the heating step is accomplished using a heating element having a fixed heating surface. McCormick illustrates in Figure 3 that a flame 18 is used to heat the glass. The flame does not have a fixed heating surface. Consequently, McCormick is not believed to anticipate the invention defined by Claim 17 as it is presently presented. Furthermore, neither Morgan et al, Kuramoto et al, Jackson, or Bian et al teach the step of heating a glass work piece using a heating element having a fixed heating surface without mechanically contacting the major surfaces of the work piece. Consequently, McCormick is not believed to anticipate or render obvious the subject matter defined by Claim 17 when considered alone or in combination with the above-identified patents and publication.

Claim 24 has been amended to clarify that the causing step occurs subsequent to the providing step. Hence, claim 24 does require that the thermal expansion follow the crack forming step. Consequently, McCormick is not believed to anticipate or render obvious the subject matter defined by Claim 24.

Claim 36 has been amended to clarify that one of the product piece or the waste piece is moved close enough to a vacuum chuck so as to be held by the vacuum chuck. The official action states in the last paragraph of page 3 that "Jackson's sucking of the glass sheet toward

the vacuum chuck constitutes movement of the product piece.” Applicants submit, however, that such a movement does not place the product piece or the waste piece close enough to the vacuum such that it can be held by the vacuum. Hence, McCormick is not believed to anticipate or render obvious the subject matter defined by Claim 36 when considered alone or in combination with Jackson.

Claim 40 has been amended to clarify that the adjacent waste piece or the product piece is moved by moving the temperature element. The office action asserts in the first full paragraph of page 4 that “the thermal expansion constitutes movement between the product and waste pieces caused by the heating element.” Such a movement does not anticipate the movement now defined by claim 40. Hence, McCormick is not believed to anticipate or render obvious the subject matter defined by Claim 40.

In light of the above discussion, it is respectfully submitted that independent Claims 1, 17, 24, 36, and 40 are patentably distinguishable from the applied patents and publication, and the dependent claims are therefore also patentably distinguishable from the same.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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IN THE CLAIMS

Please cancel claims 6 and 45-47 without prejudice or disclaimer.

Please amend claims as 1, 17, 24, 36, and 40 as shown in the attached marked-up copy to read as follows:

1. (Amended) A method comprising:

providing a glass work piece with an inner cut and an outer cut formed therein, the portion of the work piece outside said outer cut constituting an outer waste piece, the portion of said work piece inside said inner cut constituting an inner waste piece, the portion of said work piece between said inner and outer cuts constituting a middle portion of said work piece;

heating the middle portion and cooling the inner waste piece including the sub-steps of,

placing said middle portion proximate to but not in contact with a surface of a heating element,

placing a cooling element against the inner waste piece, and

lifting the inner waste piece relative to the middle portion to thereby separate the inner waste piece from the middle portion; and

separating the inner waste piece from the middle portion.

17. (Twice Amended) Method comprising:

providing a glass work piece that surrounds a waste piece;  
heating the glass work piece using a heating element having a fixed heating surface  
without mechanically contacting the major surfaces of said work piece;  
cooling the waste piece, wherein the waste piece contracts relative to the work piece,  
and the work piece expands relative to the waste piece; and  
separating the work piece from the waste piece.

24. (Twice Amended) Method comprising:

providing a work piece comprising a crack extending all the way through the  
thickness of the work piece, said crack having a closed shape such that the crack surrounds a  
first portion of said work piece and is surrounded by a second portion of said work piece,  
causing a temperature differential between said first and second portions subsequent  
to the providing step such that the first portion has a greater temperature than the second  
portion, thereby facilitating the separation of the first and second portions.

36. (Amended) Method comprising:

providing a temperature difference between a product piece and a waste piece so that  
said waste piece and product piece can be moved relative to one another;  
moving one of said product piece or said waste piece so that said moved product  
piece or waste piece is [in proximity] close enough to a vacuum chuck so as to be held by the  
vacuum chuck; and

causing said vacuum chuck to hold said moved product piece or waste piece.

40. (Twice Amended) Method comprising:

providing a work piece and a waste piece;

placing one of the waste piece or the product piece adjacent to a temperature element, said temperature element changing the temperature of the adjacent waste piece or product piece so that the waste piece and produce pieces can be displaced relative to one another; and

moving the adjacent waste piece or product piece [using] by moving the temperature element in order that the waste and product pieces are displaced relative to one another.